



HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200315123-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Susie Wee et al.

Confirmation No.: 8755

Application No.: 10/682,542

Examiner: Bautista X.

Filing Date: 10-9-03

Group Art Unit: 2179

Title: COMMUNICATION AND COLLABORATION SYSTEM USING RICH MEDIA ENVIRONMENTS

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 12-5-08.

☒ The fee for filing this Appeal Brief is \$540.00 (37 CFR 41.20).

☐ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month
\$130

☐ 2nd Month
\$490

☐ 3rd Month
\$1110

☐ 4th Month
\$1730

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$ 540. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Typed Name: Paul H. Horstmann

Signature: Paul H. Horstmann

Respectfully submitted,

Susie Wee et al.

By: Paul H. Horstmann

Paul H. Horstmann

Attorney/Agent for Applicant(s)

Reg No.: 36,167

Date: 2-5-09

Telephone: 323-605-4717



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In Re Application of:

Susie Wee et al.

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For: COMMUNICATION AND
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Examiner: Bautista X..

Art Unit: 2179

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Paul H. Horstmann

Name of Person Mailing Correspondence

Paul H. Horstmann

Signature

2-5-09

Date

Appellant's Brief (Pursuant to 37 C.F.R. §41.37)

Dear Sir:

Applicant/ Appellant submits this Appeal Brief in connection with the
above-referenced patent application which is on appeal to the Board of Patent
Appeals and Interferences.

02/09/2009 CCHAU1 00000036 082025 10682542

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REAL PARTY IN INTEREST

The real party in interest in this application is Hewlett-Packard Development Company, L.P.

RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any other related appeals or interferences that may directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF THE CLAIMS

Claims 1-8, 14-29, 32-41, 44, and 45 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application 2004/0172255 of *Aoki et al.* ("*Aoki*") and U.S. Patent Application 2004/0201710 of *Uchihashi et al.* ("*Uchihashi*").

Claims 9-13, 30, 31, 42, and 43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Aoki* and *Uchihashi* and U.S. Patent Application 2002/0191071 of *Rui et al.* ("*Rui*").

The examiner has objected to the specification under 37 CFR §1.75(d)(1) and MPEP §608.01(o) with respect to claims 34-45 and has objected to the drawings under 37 CFR §1.84(p)(5).

Appellant appeals the rejection of all of the pending claims 1-45. Claims 1-45 as currently pending are set forth in the attached Appendix.

STATUS OF AMENDMENTS

Appellant is unaware of any amendments filed after the Final Office Action mailed 9-5-09 which finally rejected claims 1-45.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claims 1, 22, and 34 are directed to enabling multiple communication interactions to form among multiple individuals that are physically present in different environments by using respective sets of sensing and rendering components in the environments to detect the communication interactions and then capturing and combining the media data for the sensing and rendering components in response to the activities of the individuals associated with the respective communication interactions. (See pages 1-2 of Appellant's specification).

Independent claim 1 is a system for communication including a first set of sensing and rendering components arranged to cover physical movements of multiple individuals present in a first environment (See Figure 5, element 250 and pages 15-16 of Appellant's specification) and a second set of sensing and rendering components arranged to cover physical movements of multiple individuals present in a second environment (See Figure 5, element 252 and pages 15-16 of Appellant's specification). A system according to claim 1 includes an interest thread detector (See Figure 1, element 16 and page 5 of Appellant's specification) that uses the first and second set of sensing and rendering components to detect multiple communication interactions each involving a respective subset of the individuals present in the first and second environments (See Figure 1, element 16 and page 5, last paragraph of Appellant's specification) and that maintains an interest thread for each communication interaction (See Figure 1, element 16 and page 5, last paragraph of Appellant's specification) and further includes a communication provider (See Figure 1, element 18 and page 6, first paragraph of Appellant's specification) that captures a set of media data from the sensing components and that combines the captured media data in response to the respective activities of each subset of the individuals (See Figure 2, element 36 and page 6, fourth paragraph of Appellant's specification) and that communicates the combined media data to the rendering components (See Figure 2, element 38 and page 6, fourth paragraph of Appellant's specification).

Independent claim 22 is directed to a method for communication that includes providing a first set of sensing and rendering components for covering physical movements of multiple individuals present in a first

environment (See Figure 5, element 250 and pages 15-16 of Appellant's specification) and providing a second set of sensing and rendering components for covering physical movements of multiple individuals present in a second environment (See Figure 5, element 252 and pages 15-16 of Appellant's specification). A method according to claim 22 further includes detecting multiple communication interactions each a communication interaction involving a respective subset of the individuals present in the first and second environments (See Figure 2, element 30 and page 6, second paragraph of Appellant's specification) and maintaining an interest thread for the each detected communication interaction (See Figure 2, element 32 and page 6, second paragraph of Appellant's specification) and capturing a set of media data from the sensing components (See Figure 2, element 34 and page 6, fourth paragraph of Appellant's specification) and combining the captured media data in response to the respective activities of the respective subset of the individuals (See Figure 2, element 36 and page 6, fourth paragraph of Appellant's specification) and communicating the combined media data to the rendering components (See Figure 2, element 38 and page 6, fourth paragraph of Appellant's specification).

Independent claim 34 is directed to a computer-readable storage media that includes providing a first set of sensing and rendering components for covering physical movements of multiple individuals present in a first environment (See Figure 5, element 250 and pages 15-16 of Appellant's specification) and providing a second set of sensing and rendering components for covering physical movements of multiple individuals present in a second environment (See Figure 5, element 252 and pages 15-16 of Appellant's specification). A method according to claim 22 further includes detecting multiple communication interactions each a communication interaction involving a respective subset of the individuals present in the first and second environments (See Figure 2, element 30 and page 6, second paragraph of Appellant's specification) and maintaining an interest thread for the each detected communication interaction (See Figure 2, element 32 and page 6, second paragraph of Appellant's specification) and capturing a set of media data from the sensing components (See Figure 2, element 34 and page 6, fourth paragraph of Appellant's specification) and combining the captured

media data in response to the respective activities of the respective subset of the individuals (See Figure 2, element 36 and page 6, fourth paragraph of Appellant's specification) and communicating the combined media data to the rendering components (See Figure 2, element 38 and page 6, fourth paragraph of Appellant's specification).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

I: Rejection of claims 1-8, 14-29, 32-41, 44, and 45 as being obvious in view of *Aoki* and *Uchihashi*.

II: Rejection of claims 9-13, 30, 31, 42, and 43 as being obvious in view of *Aoki* and *Uchihashi* and *Rui*.

III: Objection to the specification under 37 CFR §1.75(d)(1) and MPEP §608.01(o).

IV: Objection to the drawings under 37 CFR §1.84(p)(5).

ARGUMENT

I: Claims 1-8, 14-29, 32-41, 44, and 45 are not obvious in view of *Aoki* and *Uchihashi* because *Aoki* and *Uchihashi* do not disclose or suggest the limitations of independent claims 1, 22, and 34.

Appellant respectfully submits that independent claims 1, 22 and 34, and claims 2-8, 14-21, 23-29, 32-33, 35-41, and 44-45 which depend from independent claims 1, 22 and 34, are not obvious in view of *Aoki* and *Uchihashi* because *Aoki* and *Uchihashi* do not disclose or suggest detecting multiple communication interactions involving the physical movements of multiple individuals in respective first and second environments and then combining media data in response to activities indicated by their physical movements as claimed in claims 1, 22, and 34. Instead, *Aoki* teaches detecting different conversations, called conversational floors¹, carried on a shared communication channel² such as a telephone party line (*Aoki*, paragraphs 0006-0007) by analyzing the timing of vocalizations carried on the shared communication channel (*Aoki*, paragraph 0035) and *Uchihashi* discloses video camera tracking of individuals speaking in a meeting room (*Uchihashi*, paragraph 0008).

The examiner has stretched the limit of reason beyond its breaking point in applying the conversational floors of *Aoki* to the physical environments of claims 1, 22, and 34 by stating that *Aoki* teaches “detecting conversational characteristics...of multiple individuals present³ in a (first environment) conversational floor...” (Page 5, Office Action, mailed 9-5-08) (emphasis added). It is respectfully submitted that a conversational floor as taught by *Aoki* is not an environment as claimed in claims 1, 22, and 34 because a conversational floor as taught by *Aoki* is a sub-conversation carried on a shared communication channel (*Aoki*, paragraph 0006) whereas an environment as claimed in claims 1, 22, and 34 is a physical environment

¹ Appellant will show that the examiner has imparted a non-existent physicality into the term “conversational floor” of *Aoki*.

² *Aoki* discloses a telephone party line, instant messaging, and a computer chat room as examples of a shared communication channel. (*Aoki*, paragraphs 0007-0008)

³ It is impossible for an individual to be present in a conversational floor as stated by the examiner because a conversational floor as disclosed in *Aoki* is not a physical environment like an environment as claimed in claims 1, 22, and 34.

having sensing and rendering components that cover the physical movements and activities of multiple individuals present in the environment. It is therefore submitted that individuals cannot be “present” in a conversational floor of *Aoki* in the way that individuals are physically present in an environment as claimed in claims 1, 22, and 34.

The examiner has acknowledged that *Aoki* does not teach detecting physical movements of individuals but has stated that *Uchihashi* does and that it would have been obvious to incorporate the physical movement detection of *Uchihashi* into the system of *Aoki*. (Page 8, Office Action, mailed 9-5-08). It is submitted that any such combination of would lack the limitation of detecting multiple communication interactions involving the physical movements of multiple individuals in respective first and second environments and then combining media data in response to activities indicated by their physical movements as claims in claims 1, 22, and 34. *Uchihashi* does not teach detecting multiple communication interactions involving the physical movements of multiple individuals in respective first and second environments and then combining media data in response to activities indicated by their physical movements as claimed in claims 1, 22, and 34. Instead, the source analyzer controller 30 of *Uchihashi* only assists an operator in pointing a camera toward an activity of interest in a room. (“The candidate event activity is then provided to the operator in an intuitive format facilitating the selection of the appropriate camera capable of capturing the second speaker.” *Uchihashi* at paragraph 0022).

It is submitted that incorporation of the video tracking taught by *Uchihashi* into the system of *Aoki* for parsing conversations carried on a shared communication channel would yield a system that uses video tracking of individuals to parse conversations underway on a shared communication channel rather a system for detecting and tracking multiple communication interactions involving multiple individuals present in multiple physical environments as claimed in claims 1, 22, and 34. This conclusion is supported by the teaching in *Aoki* that the locations of users if known may be used to

parse the shared communication channel⁴ conversations. (*Aoki*, paragraph 0168).

The examiner has stated that the candidate event activities of *Uchihashi* anticipate an interest thread as claim in claims 1, 22, and 34. (Page 8, Office Action, mailed 9-5-08). It is respectfully submitted that a display of candidate event activity to a camera operator as taught by *Uchihashi* does not anticipate an interest thread for a communication interaction involving a respective subset of the individuals present in first and second environments as claim in claims 1, 22, and 34. Instead, the candidate event activities of *Uchihashi* are used to suggest camera movements to a camera operator. (*Uchihashi*, paragraph 0022).

⁴ *Aoki* in paragraph 0168 states that users present in the same building are more likely to be involved in a conversation with each other than users in remote locations who "are present in the computer-mediated communication system but not in the room." It is submitted that the term "computer-mediated communication system" is a shared communication channel.

II: Claims 9-13, 30, 31, 42, and 43 are not obvious in view of *Aoki* and *Uchihashi* and *Rui* because *Aoki* and *Uchihashi* and *Rui* do not disclose or suggest the limitations of independent claims 1, 22, and 34.

Appellant respectfully submits that claims 9-13, 30, 31, 42, and 43 are not obvious in view of *Aoki* and *Uchihashi* and *Rui* because *Aoki* and *Uchihashi* and *Rui* do not disclose or suggest detecting multiple communication interactions involving the physical movements of multiple individuals in respective first and second environments and then combining media data in response to activities indicated by their physical movements as claimed in claims 1, 22, and 34 from which claims 9-13, 30, 31, 42, and 43 depend. Appellant has shown that *Aoki* and *Uchihashi* do not teach or suggest detecting multiple communication interactions involving the physical movements of multiple individuals in respective first and second environments and then combining media data in response to activities indicated by their physical movements as claimed in claims 1, 22, and 34. *Rui* teaches aiming a camera in response to user selections (see abstract and figure 1 of *Rui*) rather than detecting multiple communication interactions involving the physical movements of multiple individuals in respective first and second environments and then combining media data in response to activities indicated by their physical movements as claimed in claims 1, 22, and 34.

III: Appellant's specification satisfies 37 CFR §1.75(d)(1) and MPEP §608.01(o) with respect to the term "computer readable storage media" recited in claims 34-45.

The examiner has stated that

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR §1.75(d)(1) and MPEP §608.01(o).

Correction of the following is required: Applicant claims a "computer-readable storage media" in claims 34-45, which is not defined in the specification.

(Page 3, Office Action, mailed 9-5-08) (emphasis added).

It is respectfully submitted that 37 CFR §1.75(d)(1) and MPEP §608.01(o) do not require that the individual term "computer-readable storage media" have an antecedent basis in the specification or be defined in the specification as stated by the examiner. Instead, 37 CFR §1.75(d)(1) states that the claim terms must find clear "support or antecedent basis" (emphasis added) and MPEP §608.01(o) states that individual terms should "have clear support or antecedent basis in the specification" (emphasis added). MPEP §2111.01 provides that claim terms are to be given their plain meaning to one of ordinary skill in the art.⁵

It is submitted that appellant's specification provides clear support for a computer readable storage media as claimed in claims 34-45 because any person skilled in the pertinent art would be well-knowledgeable of how to make and use a computer readable storage media that contains a set of code that when executed provides communication according to the steps recited in claims 34-45 from reading appellant's specification. Appellant's specification provides ample descriptions of how to detect multiple communication interactions and how to capture and combine media data from the sensing components as claimed in claims 34-45. Appellant's invention lies in the steps carried out by the code stored on a computer-readable storage media and not in the nature of the computer-readable storage media itself.⁶

⁵ MPEP §2111.01 provides that claim terms are to be given their plain meaning to one of ordinary skill in the art unless such plain meaning is contradicted by the specification and nothing in appellant's specification contradicts the plain meaning of "computer readable storage media."

⁶ Appellant is at a loss to understand what interest or purpose, public or private, would be served by requiring appellant to define "computer-readable storage media" in appellant's

IV: Appellant's drawings satisfy 37 CFR §1.84(p)(5).

The examiner has stated that

The drawings are objected to as failing to comply with 37 CFR §1.84(p)(5) because they do not include the following reference signs(s) mentioned in the description: the description of **figure 3** in the specification includes an element 13, which is not included in the drawing.⁷

(Page 3, Office Action, mailed 9-5-08) (emphasis original).

37 CFR §1.84(p)(5) in pertinent part states that "Reference characters mentioned in the description must appear in the drawings." Accordingly, appellant's description mentions a rich media environment 13 which is shown in Figure 1 of appellant's drawings.

It is submitted that the bold emphasis of "figure 3" used by the examiner is meant to convey that the examiner believes that the rich media environment 13 must appear in Figure 3 because it is mentioned after Figure 3 is mentioned in the description. It is submitted that no such requirement is imposed by 37 CFR §1.84(p)(5) or by any other rule.⁸

specification given the plain meaning of the term to one of ordinary skill in the art and given the subject matter of appellant's invention.

⁷ It is submitted that by "the drawing" the examiner refers to Figure 3 and so the examiner is demanding that although element 13 is shown in Figure 1 it must also be shown in Figure 3.

⁸ Likewise, appellant is at a loss to understand what interest or purpose, public or private, would be served by requiring appellant to include the rich media environment 13 in Figure 3 given that it is shown in Figure 1 and is well-defined in the description.

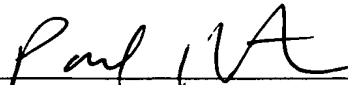
CONCLUSION

Appellant respectfully submits that the stated rejections and objections cannot be maintained in view of the arguments set forth above. Appellant respectfully submits that all of the claims 1-45 are patentable under 35 U.S.C. §103 over the references cited by the Examiner and requests that the Board of Patent Appeals and Interferences direct allowance of the rejected claims.

Respectfully submitted,

By

Date: 2-5-09



Paul H. Horstmann
Reg. No. 36,167

CLAIMS APPENDIX

1. A system for communication, comprising:
 - first set of sensing and rendering components arranged to cover physical movements of multiple individuals present in a first environment;
 - second set of sensing and rendering components arranged to cover physical movements of multiple individuals present in a second environment;
 - interest thread detector that uses the first and second set of sensing and rendering components to detect multiple communication interactions each involving a respective subset of the individuals present in the first and second environments and that maintains an interest thread for each communication interaction;
 - communication provider that captures a set of media data from the sensing components and that combines the captured media data in response to the respective activities indicated by physical movements of each subset of the individuals and that communicates the combined media data to the rendering components.
2. The system of claim 1, wherein the communication provider selects a respective subset of the first and second set of sensing and rendering components for use for each interest thread.
3. The system of claim 1, wherein the respective activities include speech levels of the individuals involved in the respective interest thread.
4. The system of claim 1, wherein the respective activities include gestures by the individuals involved in the respective interest thread.
5. The system of claim 1, wherein the respective activities include movements by the individuals involved in the respective interest thread.
6. The system of claim 1, wherein the respective activities include locations of the individuals involved in the respective interest thread.

7. The system of claim 1, wherein the communication provider refines the media data obtained from the sensor components in response to the respective activities.
8. The system of claim 1, wherein the communication provider stores the combined media data to provide a history of each communication interaction.
9. The system of claim 1, wherein the communication interactions include a communication interaction that pertains to an artifact in one of the environments.
10. The system of claim 9, wherein the artifact changes over time.
11. The system of claim 9, wherein the artifact is a shared virtual writing surface.
12. The system of claim 10, wherein a change to the artifact is made by one of the individuals involved in the interest threads.
13. The system of claim 10, wherein the communication provider records a history of the artifact over time.
14. The system of claim 1, wherein the interest thread detector detects one or more activities in the environments and creates an interest area for the detected activity.
15. The system of claim 14, wherein the interest thread detector associates the interest area with another interest thread.
16. The system of claim 1, wherein the communication interactions include a communication interaction that involves two or more of the individuals in one of the environments.

17. The system of claim 1, wherein the communication interactions include a communication interaction that involves one or more of the individuals in two of the environments.

18. The system of claim 1, wherein the interest thread detector detects formation by detecting a movement of one of the individuals.

19. The system of claim 18, wherein the movement pertains to one of the rendering devices.

20. The system of claim 18, wherein the movement pertains to one of the other individuals.

21. The system of claim 1, wherein one or more of the individuals is in a remote location and in possession of a remote sensing and rendering component.

22. A method for communication, comprising:
 providing a first set of sensing and rendering components for covering physical movements of multiple individuals present in a first environment;
 providing a second set of sensing and rendering components for covering physical movements of multiple individuals present in a second environment;
 detecting multiple communication interactions each a communication interaction involving a respective subset of the individuals present in the first and second environments;
 maintaining an interest thread for the each detected communication interaction;
 capturing a set of media data from the sensing components;
 combining the captured media data in response to the respective activities indicated by physical movements of the respective subset of the individuals;
 communicating the combined media data to the rendering components.

23. The method of claim 22, further comprising selecting a respective subset of the sensing and rendering components for use for each interest thread.
24. The method of claim 22, wherein combining the captured media data includes detecting speech levels of the corresponding individuals.
25. The method of claim 22, wherein combining the captured media data includes detecting gestures by the corresponding individuals.
26. The method of claim 22, wherein combining the captured media data includes detecting movements by the corresponding individuals.
27. The method of claim 22, wherein combining the captured media data includes detecting locations of the corresponding individuals.
28. The method of claim 22, further comprising refining the media data obtained from the sensor components in response to the respective activities.
29. The method of claim 22, further comprising storing the combined media data in a history of each communication interaction.
30. The method of claim 22, further comprising monitoring an artifact over time.
31. The method of claim 30, further comprising recording a history of the artifact over time.
32. The method of claim 22, further comprising detecting one or more activities in the environments and creating an interest area for each detected activity.
33. The method of claim 32, further comprising associating the interest area with another interest thread.

34. A computer-readable storage media that contains a set of code that when executed provides communication by:

providing a first set of sensing and rendering components for covering physical movements of multiple individuals present in a first environment;

providing a second set of sensing and rendering components for covering physical movements of multiple individuals present in a second environment;

detecting multiple communication interactions each involving a respective subset of the individuals present in the first and second environments;

maintaining an interest thread for each detected communication interaction;

capturing a set of media data from the sensing components;
combining the captured media data in response to the respective activities indicated by physical movements of the respective subset of the individuals;
communicating the combined media data to the rendering components.

35. The computer-readable storage media of claim 34, further comprising selecting a respective subset of the sensing and rendering components for use for each interest thread.

36. The computer-readable storage media of claim 34, wherein combining the captured media data includes detecting speech levels of the corresponding individuals.

37. The computer-readable storage media of claim 34, wherein combining the captured media data includes detecting gestures by the corresponding individuals.

38. The computer-readable storage media of claim 34, wherein combining the captured media data includes detecting movements by the corresponding individuals.

39. The computer-readable storage media of claim 34, wherein combining the captured media data includes detecting locations of the corresponding individuals.

40. The computer-readable storage media of claim 34, further comprising refining the media data obtained from the sensor components in response to the respective activities.

41. The computer-readable storage media of claim 34, further comprising storing the combined media data in a history of each communication interaction.

42. The computer-readable storage media of claim 34, further comprising monitoring an artifact over time.

43. The computer-readable storage media of claim 42, further comprising recording a history of the artifact over time.

44. The computer-readable storage media of claim 34, further comprising detecting one or more activities in the environments and creating an interest area for each detected activity.

45. The computer-readable storage media of claim 44, further comprising associating the interest area with another interest thread.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.